PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Comparative end-of-life communication and support in hospitalized decedents before and during the COVID-19 pandemic: a retrospective regional cohort study in Ottawa, Canada
AUTHORS	Lawlor, Peter; Parsons, Henrique; Adeli, Samantha; Besserer, Ella; Cohen, Leila; Gratton, Valérie; Murphy, Rebekah; Warmels, Grace; Bruni, Adrianna; Kabir, Monisha; Noel, Chelsea; Heidinger, Brandon; Anderson, Koby; Arsenault-Mehta, Kyle; Wooller, Krista; Lapenskie, Julie; Webber, Colleen; Bedard, Daniel; Enright, Paula; Desjardins, Isabelle; Bhimji, Khadija; Dyason, Claire; Iyengar, Akshai; Bush, Shirley H.; Isenberg, Sarina; Tanuseputro, Peter; Vanderspank-Wright, Brandi; Downar, James

VERSION 1 – REVIEW

REVIEWER	Robinson, Louise The University of Manchester, Division of Psychology and Mental Health
REVIEW RETURNED	29-Apr-2022

GENERAL COMMENTS	This is an interesting and useful study, demonstrating differences in clinical practice pre and post pandemic and by COVID infection status. I would suggest that the authors make clear the hypothesis that is being tested, as implied by the introduction. There is an assumption that the use of matching, and the analysis used, means that potential baseline differences in the groups has been accounted for. This is not the case and should be acknowledged, including as a limitation. One important potential difference is in the number of COVID cases who came from nursing homes, for example. The initial strengths/ limitations section should make explicit that raters were not blind, and (briefly) state what the limitations of a retrospective study without a qualitative aspect are.

REVIEWER	Achat, Helen Western Sydney Local Health District, Epidemiology & Health Analytics
REVIEW RETURNED	05-May-2022

GENERAL COMMENTS	An informative investigation examining communication encounters among key groups relevant to the patient and to appropriate and humane care at the end of life.

	A statement about the requirement or practice around recording/documenting occurrences of communication would enhance the paper's findings. The authors note that the information came from "individual note entries in the HER". The lay reader might be interested in knowing not only levels of accessibility to the non-in-person communication, but also how consistently communication is documented; is it mandatory to documents every instance or only specific definitions of communication? Recent prior hospitalisation and duration of stay, specifically long stays could influence frequency and type of communication as examined in this study. It would be informative if some indicator could be provided. Understanding the likely reasons for Site 2 being less likely to have in-person family presence would aid interpretation of the findings. In person and telephone communications subgroups in Table 4 could be more clearly identified in Table 4.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Louise Robinson, The University of Manchester, Lancashire Care NHS Foundation Trust
Comments to the Author:
This is an interesting and useful study, demonstrating differences in clinical practice pre and post pandemic and by COVID infection status.
Author: Thank you.

1(a)
I would suggest that the authors make clear the hypothesis that is being tested, as implied by the introduction.

Author: In accordance with the STROBE criteria, our hypothesis is clearly stated at the end of the introduction, in the sentence beginning, "We hypothesized…..". We have highlighted this text in the marked revision copy.

1(b)
There is an assumption that the use of matching, and the analysis used, means that potential baseline differences in the groups has been accounted for. This is not the case and should be acknowledged, including as a limitation. One important potential difference is in the number of COVID cases who came from nursing homes, for example.

Author: We acknowledge that the matching was limited to age, sex and care service, and other baseline differences such as admission referral source could have been present. We have amended the second bullet point in the box summarizing strengths and limitations. This now reads "Although cohort groups were effectively matched on the basis of age, sex and care service, other baseline differences could have existed between the groups." We have also amended the first sentence of the Study Strengths and Limitations section in the main manuscript and changed the order of the first and second sentences for flow purposes (going from strengths to limitations, in that order). The sentence (now the second sentence) reads, "Although cohort groups were effectively matched, the matching was limited to age, sex and care service, and other baseline differences could have existed."

In the case of admission referral source, the known vulnerability of Nursing/Long Term Care residents to the illness severity of COVID-19 is likely reflected in the finding that 50% of the COVID+ve deaths were referred from a Nursing Home/Long Term Care source (see Table 1).

1(c)
The initial strengths/ limitations section should make explicit that raters were not blind, and (briefly) state what the limitations of a retrospective study without a qualitative aspect are.

Author: The bullet point in the initial strengths/limitations section/box in relation to abstractor bias now has an additional sentence, which reads as follows: “The absence of abstractor blinding in relation to the study hypothesis was also a potential source of bias.” We also added “absence of abstractor blinding” as a limitation at the end of the discussion section.
The bullet point in relation to the retrospective nature of the study is amended to read as follows: “The retrospective nature of the study and the absence of a qualitative assessment to assess the depth and more detailed content of communication during all encounters are acknowledged limitations.”

Reviewer: 2
Dr. Helen Achat, Western Sydney Local Health District Comments to the Author:

An informative investigation examining communication encounters among key groups relevant to the patient and to appropriate and humane care at the end of life.
Author: Thank you

2(a)
A statement about the requirement or practice around recording/documenting occurrences of communication would enhance the paper’s findings. The authors note that the information came from “individual note entries in the HER”. The lay reader might be interested in knowing not only levels of accessibility to the non-in-person communication, but also how consistently communication is documented; is it mandatory to documents every instance or only specific definitions of communication?

Author: The reviewer raises a very pertinent issue in relation to the consistency of information recording our retrospective study. As stated in our manuscript, the study was conducted across three different cohort groups in Ottawa’s three acute tertiary care hospitals. Although site differences in the electronic health record (EHR) software (Epic at Site 1 and MEDITECH at the other two sites) may facilitate different levels of recording, we would argue that each site would have comparable within site data in relation to the cohort groups, and the matching process took place independently at each site. Furthermore, as an implicit measure of quality end-of-life care across our study sites, and for legal reasons, any family-healthcare team communication, irrespective of modality, that involves patient care decisions, would be expected to be recorded in the EHR. This does not mean that every encounter between the healthcare team and the decedent’s family would be recorded in the EHR. It is very difficult in a retrospective study using the EHR to create a standardized requirement for what constitutes a valid communication encounter for study purposes. We have already acknowledged the retrospective nature of our study and the potential for misclassification bias in this regard. However, to address the reviewer’s very relevant request, we have inserted a statement of understanding following the sentence with “individual note entries”. The statement reads as follows: “As an implicit measure of quality end-of-life care across our study sites, and for legal reasons, any family-healthcare team communication, irrespective of modality, that involves patient care decisions, would be expected to be recorded in the EHR.”

2(b)

Recent prior hospitalisation and duration of stay, specifically long stays could influence frequency and type of communication as examined in this study. It would be informative if some indicator could be provided.

Author: We cannot discount the impact of recent prior hospitalization on communication patterns, but believe that this would not likely be a major impact on communication encounters for patient and family in the last 48 hours of life, or for family and healthcare team in the last 5 days of life in their current study admission to one of the city's acute tertiary care hospitals. The task of obtaining data on prior hospitalization would be quite burdensome, particularly as it would involve three different institutions and three different cohort groups in each institution in a total of 425 decedents. Given the uncertainty of useful informational gain in relation to such an exercise, in our opinion, it is difficult to justify its pursuit.
We fully agree with the reviewer regarding the potential impact of longer admission duration on the frequency and type of communication in this study. In referring to duration of stay, we assume that the reviewer means long length of stay in the current study admission, not in a prior admission. In our data analysis, there was no statistically significant difference (see Table 1, p=0.062) in admission duration across the three cohort groups. However, given the potential impact of this factor on communication, we included this variable in all of our models. Admission duration was not associated with the frequency of communication modalities used in either family and healthcare team communications in the last 5 days of life, or in family-patient communication encounters in the last 48 hours of life.

2(c)
Understanding the likely reasons for Site 2 being less likely to have in-person family presence would aid interpretation of the findings.

Author: We acknowledge that this was a puzzling finding and we stopped short of speculating, in the absence of data, as to why this might be the case specifically in relation to Site 2. Although site differences in access policy might be considered the most likely explanation, we found no evidence of such differences. We have now inserted a statement to this effect at the end of paragraph two of the discussion. It reads as follows: "Although site difference in access policy might be considered as an explanation for lesser family presence in the last 48 hours of life at Site 2, we found no evidence of such difference, and the cause of this finding is unclear."

2(d)
In person and telephone communications subgroups in Table 4 could be more clearly identified in Table 4.

Author: We agree and we have submitted a revised Table 4.

In addition to the above changes, I made some minor formatting changes to spatial arrangements, not to content, in the tables. These changes should be visible in the marked copy. I have uploaded the clean and marked copies of the manuscript, as requested. I also updated the STROBE criteria document to reflect some slight changes with page numbers in the revised version of the manuscript. With direction from one of your script editors, the contributorship section has also been slightly amended to more accurately reflect my co-authors' contributions

VERSION 2 – REVIEW

REVIEWER	Robinson, Louise The University of Manchester, Division of Psychology and Mental Health

REVIEW RETURNED	17-May-2022

GENERAL COMMENTS	The authors have clarified queries and addressed the reviewers' points fully

REVIEWER	Achat, Helen Western Sydney Local Health District, Epidemiology & Health Analytics
REVIEW RETURNED	27-May-2022

GENERAL COMMENTS	PDF version, Page 13: "We hypothesized that the pandemic-related visitor and isolation restrictions imposed in these hospitals was associated..." - ‘were associated’